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ABSTRACT

The performance of 566 elementary students enrolled in grades 1-6 from Minnesota, Pennsylvania, and Washington, on direct measures of reading, spelling, and written expression was analyzed to determine the rate of students who would be eligible for special education services by each of four discrepancy criteria. Measures were individually administered by a trained examiner. Testing lasted approximately 25 minutes. Stimulus materials were presented in the following order for each student: (1) three isolated word lists, (2) three oral passages, (3) two dictated spelling lists, and (4) two story starters. Results indicated that while a 2.0 to 3.0 times discrepancy from peers was an appropriate level for determining low performance students in grades 3-6, even a stringent 3.0 times discrepancy would identify too many students in grades 1 and 2. The development of a task with a greater number of simple items is suggested as an alternate solution for identifying an appropriate criterion for students in grades 1 and 2. (Author/PN)

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ELIGIBILITY FOR LEARNING DISABILITY SERVICES: A DIRECT AND REPEATED MEASUREMENT APPROACH

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Institute for Research on Learning Disabilities

University of Minnesota

September, 1982

Abstract

The performance of 566 elementary students on direct measures of reading, spelling, and written expression was analyzed to determine the rate of students who would be eligible for special education services by each of four discrepancy criteria. Results indicated that while a 2.0 to 3.0 times discrepancy from peers was an appropriate level for determining low performance students in grades 3-6, even a stringent 3.0 times discrepancy would identify too many students in grades 1 and 2. Alternative solutions are explored for identifying an appropriate criterion for students in grades 1 and 2.

Eligibility for Learning Disability Services: A Direct And Repeated Measurement Approach

Problems related to traditional models of assessment in special and remedial education recently have been given increased attention (Salvia & Ysseldyke, 1981; Ysseldyke & Algozzine, 1979). However, viable measurement alternatives to the traditional models do exist (Lovitt, 1967). Both Bijou (1969) and Lovitt (1967) have outlined educational evaluation systems that rely upon direct and repeated measurement of student academic behaviors. As a result, several comprehensive assessment and intervention methodologies in education are available: Precision Teaching (Lindsley, 1964), Exceptional Teaching (White & Haring, 1976), and Data-Based Program Modification (Deno & Mirkin, 1977).

The movement toward measurement of functional academic behaviors appears to be gaining acceptance. Mercer, Forgnone, and Wolking (1976) noted that while most state education departments have a traditional definition of learning disability, 28% of the states now include a definitional component compatible with the direct measurement concept. King, Wesson, and Deno (1982) reported that 54% of the special education teachers they surveyed used frequent measurement in the classroom.

While direct and repeated measurement of academic skills originally was intended for assessment of student progress and ongoing treatment effectiveness, it has been suggested that the methodology may be used for eligibility decisions in special education (Jenkins, Deno, & Mirkin, 1979). Following up on this idea, Mirkin, Marston,

and Deno (1982) found that students referred by teachers did not differ on standardized tests of intelligence and achievement from students screened and referred with direct measurement. In addition, it was determined that direct measurement of reading and written expression skills differentiated LD and non-LD students as successfully as standardized tests of achievement (Deno, Marston, & Tindal, 1982).

Further research is needed in the area of direct measurement and eligibility. Based on the performance of over 500 elementary students, Deno, Marston, Mirkin, Lowry, Sindelar, and Jenkins (1982) produced a set of normative data that describes grade means and percentiles for direct measures of reading, spelling, and written expression. Additional analysis of these data should clarify the usefulness of direct measures in making eligibility decisions. For example, Deno and Mirkin (1977) recommended that students be considered "eligible for special education service when they are at least 2X [i.e., 2 times] discrepant from their peers" (p. 117). However, the research basis for this guideline has not been established.

The study presented here attempted to examine the peer discrepancy concept. In this study, the performance of a large sample of elementary students on direct measures of reading, spelling, and written expression was analyzed using several discrepancy criteria: 1.5, 2.0, 2.5, and 3.0 times discrepant from peers. The large population of students included in the study made it is possible to determine the base rate of students determined eligible by each

criterion in grades 1-6.

Method

In an effort to provide decision makers with information on how students perform on the standard tasks of reading (Deno, Mirkin, & Chiang, in press), spelling (Deno, Lowry, Mirkin, & Kuehnle, 1980), and written expression (Deno, Marston, & Mirkin, 1982), these measures were administered to a large sample of elementary students from three states: Minnesota, Pennsylvania, and Washington.

Standard Tasks

Reading. Reading materials developed by Deno et al. (in press) were used to collect information on the typical reading performance of elementary students. Three Isolated Word lists and three Oral Reading passages were administered to each student.

The Words in Isolation measure consisted of three alternative forms of 140 words each which were randomly selected by grade level from the Core List of 5,167 words listed in Basic Elementary Reading Vocabulary (Harris & Jacobson, 1972). Each 140-word list consisted of words randomly chosen from levels pre-primer to grade three. Words were included on the word lists only if they had a frequency index of more than 10 per million words in the Teachers' Wordbook of 10,000 Words (Thorndike & Lorge, 1944).

The Oral Reading measure included three passages of about 300 words each. They were selected from the third grade book of three different basal reading series: Allyn-Bacon, Ginn 720, and Houghton-Mifflin. Each passage consisted of the first part of the story. The Fry Readability Index Formula (Fry, 1968) was used to

ensure that each passage was at the third grade level.

On both reading measures, the examiner recorded the number of words pronounced correctly and incorrectly. Students were given 60 seconds to read aloud from each stimulus material. For each subject, two measures of correct reading were computed: Mean Number of Words Read Correctly from Word Lists and Mean Number of Words Read Correctly from Passages.

Spelling. The measurement of spelling performance in this descriptive study was based on two dictated spelling lists composed of randomly selected words from levels preprimer to grade three from Basic Elementary Reading Vocabularies (Harris & Jacobson, 1972).

For the spelling measure, the examiners dictated words for three minutes for each list while the subject wrote his or her responses (cf. Deno et al., 1980). The spelling lists were scored for Number of Correct Letter Sequences (cf. White & Haring, 1976) and Number of Words Spelled Correctly. For each subject, the mean on each measure was computed.

Written expression. The format developed by Deno et al. (1982) in the formative evaluation of written expression was adopted for this study. Each student was presented two Story Starters and given three minutes for each to write a composition.

Each student's composition was then scored for the Mean Number of Total Words Written, Mean Number of Words Spelled Correctly, and Mean Number of Correctly Written Letter Sequences.

Subjects

The formative measures of reading, spelling, and written

expression were administered to 566 students enrolled in grades 1-6 from Minnesota, Pennsylvania, and Washington. All students were selected randomly from within the school districts that volunteered to participate in the study. There were 275 males and 291 females in the total sample. Of the 566 students tested, there were 92 first graders, 85 second graders, 96 third graders, 99 fourth graders, 101 fifth graders, and 93 sixth graders.

Of the 566 students tested, 134 (63 males, 71 females) were from Minnesota. Seventy-three percent of these subjects were selected from two urban areas with populations of 50,000 and 100,000 people. These elementary students were distributed approximately equally among grades 1-6.

The Pennsylvania sample included 326 of the 566 students. These elementary students were selected randomly from two areas (rural and urban) in central Pennsylvania. There were 157 males and 169 females who were equally distributed among grades 1-6.

The remaining 106 elementary students tested were from the Seattle, Washington area. This sample included 55 males and 51 females. Again, the students were approximately equally distributed through grades 1-6.

Procedure

The reading, spelling, and written expression measures were administered to each child on an individual basis by a trained examiner in the fall and spring of the school year. Testing lasted no longer than 25 minutes.

The order of presentation of materials was as follows:

1. Three Isolated Word Lists (1 minute each)
2. Three Oral Passages (1 minute each)
3. Two Dictated Spelling Lists (3 minutes each)
4. Two Story Starters (3 minutes each)

The order of the stimulus materials was the same for each of the 566 students.

Results

For each measure, four discrepancies (1.5, 2.0, 2.5 and 3.0 times discrepant from peers) were used to calculate the percentage of students who would be classified. The data are summarized for the fall and spring assessments in the following order: (a) reading - word lists (Tables 1 and 2); (b) reading - passages (Tables 3 and 4); (c) spelling - words (Tables 5 and 6); (d) spelling - letter sequences (Tables 7 and 8); (e) written expression - words written (Tables 9 and 10); (f) written expression - letter sequences (Tables 11 and 12); (g) written expression - words spelled correct (Tables 13 and 14).

Insert Tables 1-14 about here

The use of a 2.0 times discrepancy resulted in the classification of a large percentage of students in grades 1 and 2 for all academic areas. However, the percentages were considerably greater for grade 1 than grade 2. The lowest percentage of students classified in these grades was 10.5% - for the number of correct letter sequences spelled by second graders in the fall (see Table 7). In contrast, the greatest percentage of students classified was over 60% - for the number of words spelled correct by first graders in the fall (see

Table 5). Generally, the percentage classified ranged between 10% and 40%.

The use of a more stringent criterion (3.0 times discrepant) for students in grades 1 and 2 resulted in a reduction in classification of only 5%-15%, leaving the absolute levels still quite high. The percentages of students classified in grades 1 and 2 were highest on the word list reading task (see Tables 1 and 2) and lowest on the written expression task (see Tables 9-13).

Finally, there appeared to be an effect due to the time of the assessment on the percent of grade 1 and 2 students classified. A greater percentage of students were classified in the fall than in the spring. The difference ranged from 0.1 (2.0 times discrepant on total words written - grade 2; see Tables 9 and 10) to over 20% (1.5, 2.0, 2.5, and 3.0 times discrepant on words spelled correctly - grade 1; see Tables 5 and 6). In general, changes were considerably less for second graders.

On most measures, the percentage of students classified using the various criteria was lower for students in grades 3-6 than for students in grades 1 and 2. In general, a successively smaller percentage of students were classified at each increasing grade level. This difference, however, was greater for a 2.0 times discrepancy and considerably less when the discrepancy was 3.0 times. There were also differences between the various academic tasks in the percentages of students classified. The percentages were the highest in reading and spelling and lowest in written expression. Using a 2.0 times discrepancy, approximately 5%-15% of the students were classified in

these two areas, in contrast to 3%-8% in written expression.

For students in grades 3-6, differences again were found between fall and spring testings, with fewer students classified in the spring. However, the differences were considerably less than those found for students in grades 1 and 2. The changes from fall to spring were also less for more stringent discrepancy criteria (i.e., 3.0 times).

The average percentages of students classified according to each discrepancy criterion across all seven measures are presented in Table 15. This table again shows the general decrease in classification percentages with increasing grade. For grades 3-6, the average number of students declared eligible with the 2.0 discrepancy was 7.4%; it was 4.9% for the 2.5 discrepancy and 4.4% for the 3.0 discrepancy. The average percentage of students identified in grades 1 and 2 for all discrepancy criteria was always greater than 12%.

Insert Table 15 about here

Discussion

The results of this study indicate that a 2.0 to 3.0 times discrepancy is an appropriate level for determining low performance students in grades 3-6. The percentage of students performing at this level is approximately the same as the percentage (5%-8%) served in special education programs for the mildly handicapped (LD, EMR) (Lerner, 1976; Gardner, 1977). The percentages for the 2.0 times discrepancy are lowest in written expression, regardless of the unit

of analysis (total words, correctly spelled words, or correct letter sequences), with the range from 3%-9%. In spelling and reading, the percentages are slightly higher (5%-22%). It is only when the discrepancy becomes 2.5 (in reading from passages) or 3.0 (in reading from word lists) that the percentage of students approximates the level currently served. In spelling, a 2.5 discrepancy for correct letter sequences and a 3.0 discrepancy for words spelled correct are necessary to reach the current identification level.

Given the similarity of percentages across the academic areas, it appears that one criterion could be used for all three academic areas. If a 3.0 times discrepancy criterion was used, the percentage of low functioning students would range from 1% to 9%. This level is certainly in keeping with current practice.

The percentages of students in grades 1 and 2 were quite high for all levels of discrepancy. Even with a 3.0 times discrepancy, far too many students would be identified than is either logical or practical. Generally, the ranges were from 10% to 60%. There are two alternatives to this problem: (a) a more stringent criterion could be adopted (i.e., 5.0 times discrepant), or (b) a task with a greater number of simple items could be developed. The most probable reason for the high percentage of low functioning students is that the measurement task failed to distribute students along a continuum. Rather, the distribution was quite narrow (leptokurtic) and possibly even skewed (positively). The result is an inordinate number of students performing poorly on the task.

Of the two solutions suggested above, only the second one is

satisfactory. By simply adopting a more stringent criterion, the percentage of students identified would be reduced, but other problems related to the accuracy or reliability of the criterion would remain. Given the standard error of measurement of any of the academic tasks, the use of a stringent criterion on a narrow range of scores likely would result in an unstable identified population. Rather, the task at hand would be to develop more and diverse items for each of the academic areas.

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Table 1

Percentage of Students in Fall Meeting Discrepancy Criteria for

Words Read Correctly on Word List Reading Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	3.75	2.49	59.8	1.86	56.5	1.50	50.0	1.25	47.8
2	25.50	16.98	46.5	12.75	39.5	10.20	33.7	8.49	29.1
3	49.90	33.23	27.7	24.95	22.3	19.96	16.0	16.62	9.6
4	61.32	40.83	19.6	30.66	12.4	24.53	10.3	20.42	5.2
5	68.63	45.70	19.2	34.31	11.1	27.49	6.1	22.85	5.1
6	83.53	55.63	15.2	41.76	9.8	33.41	8.7	27.82	6.5

Table 2

Percentage of Students in Spring Meeting Discrepancy Criteria for Words Read Correctly on Word List Reading Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	17.32	11.54	51.1	8.66	44.6	6.92	41.3	5.77	34.8
2	41.02	27.35	38.4	20.51	30.2	16.40	27.9	13.67	23.3
3	63.02	42.01	25.5	31.51	13.8	25.21	9.6	21.00	6.4
4	71.57	47.71	15.5	35.79	9.3	28.63	4.1	23.85	4.1
5	77.76	51.84	15.0	38.88	7.0	31.10	6.0	25.92	5.0
6	90.71	60.47	10.9	45.36	8.7	36.28	6.5	30.24	5.4

Table 3

Percentage of Students in Fall Meeting Discrepancy Criteria for

Words Read Correctly on Passage Reading Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	11.31	7.53	52.6	5.66	44.0	4.52	38.5	3.77	35.2
2	57.22	38.11	37.2	28.61	31.4	22.89	26.7	19.05	17.4
3	98.92	65.88	25.5	49.46	10.6	39.57	5.3	32.94	4.3
4	113.93	75.87	14.4	56.97	7.2	45.57	4.1	37.93	3.1
5	128.76	85.75	14.1	64.38	5.1	51.50	3.0	42.87	3.0
6	147.17	98.02	12.0	73.59	8.7	58.87	6.5	49.01	5.4

Table 4

Percentage of Students in Spring Meeting Discrepancy Criteria for Words Read Correctly on Passage Reading Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	36.42	24.28	38.0	18.21	27.2	14.57	21.7	12.14	17.4
2	81.90	54.6	27.9	40.95	23.3	32.76	16.3	27.3	11.6
3	119.18	79.45	20.2	59.59	8.5	47.67	5.3	39.73	4.3
4	127.57	85.05	13.4	63.79	7.2	51.02	5.2	42.52	4.1
5	142.25	94.83	11.0	71.13	5.0	56.90	3.0	47.42	2.0
6	158.65	105.77	8.7	79.32	6.5	63.46	5.4	52.88	5.4

Table 5

Percentage of Students in Fall Meeting Discrepancy Criteria for

Words Spelled Correctly on Spelling Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	1.53	1.02	70.3	.77	61.7	.61	58.2	.51	52.7
2	6.35	4.23	41.9	3.18	31.4	2.54	29.1	2.11	23.3
3	13.96	9.30	27.7	6.98	16.0	5.58	10.6	4.65	6.4
4	18.67	12.43	20.6	9.34	13.4	7.47	8.2	6.22	7.2
5	22.70	15.12	18.0	11.35	8.0	9.08	5.0	7.56	3.0
6	27.39	18.24	16.3	13.69	10.9	10.96	7.6	9.13	5.4

Table 6

Percentage of Students in Spring Meeting Discrepancy Criteria for Words Spelled Correctly on Spelling Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	5.86	3.91	50.0	2.93	36.7	2.34	28.9	1.95	21.1
2	12.01	8.00	36.9	6.00	22.6	4.80	14.3	4.00	13.1
3	19.68	13.12	18.5	9.84	9.8	7.87	6.2	6.56	5.3
4	23.65	15.77	20.0	11.83	10.5	9.46	3.2	7.88	2.1
5	26.98	17.99	18.2	13.49	9.1	10.79	4.0	8.99	3.0
6	32.16	21.44	14.3	16.08	7.7	12.86	5.5	10.72	4.4

Table 7

Percentage of Students in Fall Meeting Discrepancy Criteria for

Correct Letter Sequences on Spelling Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	17.70	11.79	38.5	8.85	30.8	7.08	24.2	5.89	17.6
2	60.88	40.55	30.2	30.44	10.5	24.35	7.0	20.27	3.5
3	104.03	69.28	19.1	52.15	13.8	41.61	7.4	34.64	4.3
4	131.04	87.27	17.5	65.52	10.3	52.41	5.2	43.64	4.1
5	154.93	103.18	11.0	77.46	7.0	61.97	4.0	51.59	3.0
6	180.31	120.09	13.0	90.16	8.7	72.12	6.5	60.04	4.3

Table 8

Percentage of Students in Spring Meeting Discrepancy Criteria for Correct Letter Sequences on Spelling Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	46.31	30.87	35.6	23.16	17.8	18.52	14.4	15.44	6.7
2	98.58	65.72	23.8	47.79	10.7	39.43	4.8	32.86	1.2
3	138.95	92.63	14.1	69.48	4.3	55.58	2.2	46.32	2.2
4	160.49	106.99	12.6	80.25	4.2	64.20	2.1	53.50	1.1
5	185.51	123.67	12.1	92.76	5.1	74.20	3.0	61.84	1.0
6	211.73	141.15	12.1	105.87	6.6	84.69	3.3	70.58	1.1

Table 9

Percentage of Students in Fall Meeting Discrepancy Criteria for

Total Words Written on Written Expression Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classifed	3.0X Discrepancy	Percent Classified
1	7.84	5.20	48.9	3.92	44.0	3.14	40.0	2.61	36.7
2	19.67	13.11	27.1	9.84	14.1	7.87	10.0	6.56	9.5
3	32.02	21.35	19.1	16.01	6.4	12.80	3.2	10.67	3.2
4	37.53	25.02	12.5	18.77	3.1	15.01	3.1	12.51	2.1
5	43.98	29.32	11.0	21.99	3.0	17.59	2.0	14.66	1.0
6	52.09	34.69	13.2	26.05	6.6	20.84	4.4	17.36	2.2

Table 10

Percentage of Students in Spring Meeting Discrepancy Criteria for Total Words Written on Written Expression Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	15.64	10.43	33.7	7.82	26.1	6.26	17.4	5.21	15.2
2	28.52	19.01	25.6	14.26	14.0	11.41	11.0	9.51	7.5
3	37.04	24.69	15.1	18.52	4.3	14.82	4.3	12.35	4.3
4	41.38	27.58	11.3	20.69	5.2	16.55	3.1	13.79	3.1
5	49.22	32.81	12.0	24.61	5.0	19.69	1.0	16.41	1.0
6	53.72	35.81	10.9	26.86	5.4	21.49	2.2	17.91	1.1

Table 11

Percentage of Students in Fall Meeting Discrepancy Criteria for

Correct Letter Sequences on Written Expression Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classifed	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	22.52	15.01	51.1	11.26	44.0	9.00	39.6	7.51	37.4
2	73.43	48.95	29.4	36.72	21.2	29.37	16.5	24.48	11.8
3	132.51	88.34	28.7	66.26	9.6	53.00	5.3	44.17	4.3
4	159.68	106.45	14.6	79.84	4.2	63.87	3.1	53.23	2.1
5	189.53	126.35	14.0	94.77	6.0	75.81	3.0	63.18	1.0
6	220.38	146.92	12.1	110.19	6.6	88.15	4.4	73.46	3.3

Table 12

Percentage of Students in Spring Meeting Discrepancy Criteria for Correct Letter Sequences on Written Expression Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	55.25	36.83	35.9	27.63	29.3	22.10	23.9	18.42	16.3
2	107.83	71.89	29.1	53.92	17.4	43.13	9.3	35.94	7.0
3	151.49	100.99	18.3	75.75	6.5	60.60	5.4	50.50	4.3
4	178.85	119.23	14.4	89.43	6.2	71.54	4.1	59.62	3.1
5	214.52	143.01	14.0	107.26	5.0	85.80	2.0	71.51	2.0
6	240.02	160.01	12.0	120.01	5.4	96.00	2.2	80.00	1.1

Table 13

Percentage of Students in Fall Meeting Discrepancy Criteria for

Words Spelled Correctly on Written Expression Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	5.01	3.34	56.0	2.51	45.1	2.00	39.6	1.67	38.5
2	15.62	10.41	30.6	7.81	23.5	6.25	16.5	5.21	10.6
3	28.98	19.32	19.1	14.49	5.3	11.59	3.2	9.66	3.2
4	34.84	23.23	16.7	17.42	4.2	13.94	4.2	11.61	4.2
5	41.18	27.45	10.0	20.59	3.0	16.47	3.0	13.73	1.0
6	47.38	31.59	12.1	23.69	6.6	18.95	4.4	15.79	3.3

Table 14

Percentage of Students in Spring Meeting Discrepancy Criteria for Words Spelled Correctly on Written Expression Task

Grade	Mean	1.5X Discrepancy	Percent Classified	2.0X Discrepancy	Percent Classified	2.5X Discrepancy	Percent Classified	3.0X Discrepancy	Percent Classified
1	11.59	7.72	37.0	5.80	26.1	4.64	23.9	3.86	20.7
2	23.64	15.76	26.7	11.82	18.6	9.46	12.8	7.88	8.1
3	34.19	22.79	21.5	17.10	6.5	13.68	5.4	11.40	4.3
4	38.96	25.97	14.4	19.48	7.2	15.58	4.1	12.99	3.1
5	46.87	31.25	12.0	23.44	6.0	18.75	2.0	15.62	1.0
6	51.08	34.05	13.2	25.54	7.7	20.43	5.5	17.03	3.3

Table 15

Average Percentage of Students Classified for Seven Direct Measures of Reading, Spelling, and Written Expression

Grade	1.5X Discrepancy	2.0X Discrepancy	2.5X Discrepancy	3.0X Discrepancy
1	47.0	38.1	33.0	28.4
2	32.2	22.0	16.9	12.1
3	21.4	8.9	6.4	4.7
4	15.5	7.5	4.6	5.5
5	13.7	5.6	3.4	2.3
6	12.3	7.6	5.2	3.7

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